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January 13, 1995

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Room 222
Washington, D.C. 20554

Re: PR Docket No. 92-235; Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services; Notice of *Ex Parte* Filing

Dear Mr. Caton:

Over the past several months, a number of private radio user associations, working in close coordination with their respective members, have engaged in an intensive study aimed at developing a practical and feasible for the transition to narrower channelization in the private land mobile frequency bands below 512 MHz. The enclosed document presents the results of this effort for the Commission's consideration.

The user associations participating in this effort are as follows:

American Association of State Highway and Transportation Officials (AASHTO)
American Automobile Association (AAA)
American Petroleum Institute (API)
American Trucking Associations, Inc. (ATA)
Association of American Railroads (AAR)
Association of Public Safety Communications Officials-International, Inc. (APCO)
Forest Industries Telecommunications (FIT)
Industrial Telecommunications Association, Inc. (ITA)
International Taxicab and Livery Association (ITLA)
Manufacturers Radio Frequency Advisory Committee, Inc. (MRFAC)
National Association of Business and Educational Radio, Inc./Personal Communications Industry Association (NABER/PCIA)
Telephone Maintenance Frequency Advisory Committee (TELFAC)
UTC--The Telecommunications Association (UTC).

Collectively, the above-named user associations represent approximately 95% of the licensees in the Private Land Mobile Radio Services. The transition plan presented in the enclosed filing reflects, therefore, the viewpoints and concerns of the vast majority of the private land mobile radio user community.

Should there be any questions regarding the proposed transition plan, kindly contact either Jeffrey L. Sheldon, UTC, at (202) 872-1264; Thomas J. Keller, counsel for AAR, at (202) 371-6000; Robert M. Gurss, counsel for APCO, at (202) 457-7329; or Frederick J. Day, ITA, at (703) 528-5115.

Very truly yours,

Frederick J. Day

Frederick J. Day

Enclosure

cc: Chairman Reed E. Hundt
Commissioner James H. Quello
Commissioner Andrew C. Barrett
Commissioner Susan Ness
Commissioner Rachelle B. Chong
Regina M. Keeney, Esq.
Mr. Ralph A. Haller
Ms. Kathryn S. Hosford

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Replacement of Part 90 by	)	
Part 88 to Revise the	)	**PR Docket No. 92-235**
Private Land Mobile Radio	)	
Services and Modify the	)	
Policies Governing Them	)	

To: The Commission

PLAN DEVELOPED BY USER ASSOCIATIONS FOR EFFICIENT AND ORDERLY CONVERSION TO NARROWER CHANNELS IN THE 150-174 MHz AND 450-512 MHz FREQUENCY BANDS

INTRODUCTION

1. On October 8, 1992, the Federal Communications Commission adopted a Notice of Proposed Rule Making in the Private Land Mobile Radio Services (PLMRS) "refarming" proceeding.[1] In the intervening two years, in an effort to resolve the many difficult issues issues raised in the Notice of Proposed Rule Making, the Commission has reviewed the extensive public record of comments and ex parte filings, sponsored formal presentations by key members of the industry, and conducted extensive analysis and study.

2. At this juncture, the most critical and delicate issue in this proceeding involves the proper approach and time frame

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[1] Notice of Proposed Rule Making (FCC 92-469), PR Docket No. 92-235, 7 FCC Rcd. 8105 (1992).

for introducing narrower channel spacings in the 150-174 MHz and 450-512 MHz frequency bands. In recognition of the significance of this issue to the future of the Private Land Mobile Radio Services, a broad cross-section of PLMRS user associations and their members have undertaken intensive analysis and study aimed at formulating a realistic and appropriate plan to govern the transition to narrower channel spacings. The purpose of the instant document is to present to the Commission the results of this effort.

BACKGROUND

3. Accordingly, in this document, the participating user associations set forth their recommended framework for converting to narrower channel spacings. This plan is the product of, and is supported by the following user associations:

American Association of State Highway and Transportation Officials (AASHTO)
American Automobile Association (AAA)
American Petroleum Institute (API)
American Trucking Associations, Inc. (ATA)
Association of American Railroads (AAR)
Association of Public Safety Communications Officials-International, Inc. (APCO)
Forest Industries Telecommunications (FIT)
Industrial Telecommunications Association, Inc. (ITA)
International Taxicab and Livery Association (ITLA)
Manufacturers Radio Frequency Advisory Committee, Inc. (MRFAC)
National Association of Business and Educational Radio, Inc./Personal Communications Industry Association (NABER/PCIA)
Telephone Maintenance Frequency Advisory Committee (TELFAC)
UTC--The Telecommunications Association (UTC).

4. The above-referenced user associations represent approximately 95% of the licensees in the Private Land Mobile Radio Services. These associations and their members are committed to making more intensive use of the existing spectrum, consistent with the needs of private land mobile users and the availability of equipment capable of meeting the diverse requirements of the user community.

5. As the Commission will recall, when the Land Mobile Communications Council submitted its "Consensus Plan" in April 1993, the timetables presented in the Consensus Plan for the introduction of narrower channels in the 421-512 MHz bands received the unanimous support of all LMCC members. However, with respect to the 150-174 MHz band, some LMCC members favored a transition plan based on the implementation of 12.5 kilohertz for all systems by the year 2004. Other LMCC members preferred a plan that would have resulted in the implementation of 6.25 kilohertz equipment for all systems no later than 2004. As a result of this dichotomy, LMCC formulated two conversion plans for the 150-174 MHz band, one referred to as "Option A" and the other as "Option B."

6. The user associations that have participated in the effort to develop the industry plan set forth in the instant document represent a broad cross-section of private land mobile radio users. The conversion plan presented in this document was

the product of a deliberate and careful effort to accommodate the needs of all interested user associations. The list of participating organizations include associations that favored LMCC Option A as well as associations that supported LMCC Option B. As a result, the instant plan represents a true consensus among the major user associations and their memberships.

7. The participating associations agree that there is a need to make more intensive use of the existing PLMRS frequencies below 512 MHz and to encourage the implementation of technologically-advanced equipment in these bands. The associations note that the Commission has consistently expressed concern that the rules ultimately adopted in this proceeding should be crafted to prevent hardship on users of the private land mobile radio spectrum.[2] Accordingly, as the Commission recognizes, the measures adopted to promote more intensive use of the radio spectrum must reflect a careful balancing of costs to the industry and expected benefits.

8. The ensuing public policy analysis must also carefully balance the burdens imposed upon existing users of the spectrum with the needs of future users. In the hope of promoting an equitable balance of the competing concerns underlying this

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[2] See, for example, FCC Public Notice dated March 1, 1993, mimeo #31969.

proceeding, the associations have developed the following plan aimed at ensuring a reasonable pace in implementation of efficient bandwidths.

RECOMMENDED PLAN FOR CONVERSION TO NARROWER CHANNEL SPACINGS

9. The private land mobile bands at 150-174 MHz and 421-512 MHz currently support approximately 12 million base, mobile and portable transmitters. This represents an aggregate embedded equipment investment by users of over $25 billion. Further, most private land mobile users place an extremely high priority on maintaining communications capability, and some users operate under severe budgetary constraints. Therefore, users rarely changeout an entire system at once. Accordingly, any refarming migration plan must adequately provide for the graceful transition and amortization of embedded systems as well as a sufficient planning cycle to implement new technologies.

10. It is imperative that the Commission factor realistic equipment replacement cycles into the transition plan implemented in this proceeding. In the context of the Private Land Mobile Radio Services, the participating user associations believe that a graceful transition plan must allow licensees to amortize their embedded equipment over a minimum of ten to fifteen years. Accordingly, as explained below, the plan developed by this group is premised on two distinct sets of technical requirements, one

extending from 1997 to approximately 2011 and the other extending roughly from 2011 to 2021.

11. The Commission has recognized that "private land mobile licensees are being put in a very difficult position with respect to long-range radio system planning decisions."[3] The Commission has also stated that "adequate equipment amortization periods are contemplated."[4] Consistent with these concerns, the user associations believe that the Commission must permit licenses who purchase 25 kHz equipment before 1997 to fully amortize the equipment before they are required to invest in 12.5 kHz equipment. Similarly, licensees who convert to 12.5 kHz equipment must be permitted ample time to amortize that equipment before any mandatory conversion to 6.25 kHz equipment takes effect. For these reasons, the user associations urge the Commission to use two transition cycles as the basis for the "refarming" conversion plan. Users still have the option of converting to more efficient equipment prior to the mandatory conversion dates, as soon as such equipment is commercially available.

12. In addition, the essence of private radio is to provide a best-fit solution to a particular user's communications requirements. This requires a regulatory structure, as well as

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[3] Public Notice, DA 94-369, released April 1994.

[4] Id.

equipment, which supports the diverse needs of private land mobile users. System operations span the gamut from several low cost portables providing basic on-site voice communications to expansive industrial or public safety/public service systems providing voice and data communications to several hundreds or even thousands of employees. Users today can choose from a full line of products offered by competitive manufacturers which meet this wide range of requirements. A refarming migration plan must be structured such that private land mobile users continue to have these choices.

13. This user group has developed the following recommended migration plan to meet the Private Radio Bureau's stated objective of quadrupling capacity. In addition to increasing capacity, the plan attempts to provide users with a continued choice of competitive products and technologies which meet the diverse range of best-fit solutions required and offers a graceful transition to accommodate the need for gradual system changeout, utilization of embedded investment and sufficient planning cycles for system replacement.

14. The recommended plan prescribes firm dates for the introduction and marketing of equipment designed to operate on narrower channels. Implementation would be left to the various user groups representing the individual radio services. However,

at this juncture, it appears that most user groups support the offset overlay channeling plan developed by the railroads for the 150 MHz band. The participating associations believe, based on the information available from equipment manufacturers, that this flexible approach should not negatively affect equipment compatibility or reduce the associated economies of scale.

15. Under the proposed plan, there are three dates of fundamental significance:

- January 1, 1997 (Effective date of new rules + 2 yrs.)

  Assuming that the final rules developed in this proceeding become effective on January 1, 1995, equipment manufacturers would not be permitted to sell single-mode 25 kHz equipment for the 150-174 MHz and 450-512 MHz bands on or after January 1, 1997. Begining on that date, all PLMRS equipment sold would have to be capable of operating on 12.5 kHz or narrower channels.

- January 1, 2011 (Effective date of new rules + 16 yrs.)

  All newly type-accepted equipment would have to be capable of operating on 6.25 kHz or narrower channels.

- January 1, 2021 (Effective date of new rules + 26 yrs.)

  All new equipment sold would have to be a capable of operating on 6.25 kHz or narrower channels.

16. The plan, which is set forth in greater detail in the attached Appendix, also contains milestones for implementation of narrower channelization by licensees in both urban and rural areas of the country. As with the dates governing the sale of equipment, the dates applicable to urban and rural systems assume

that the new rules adopted in the refarming proceeding would take effect in 1995. The milestones established for urban systems would apply to all systems that are located within 100 miles of any of the top sixty urban areas listed in Section 90.741 of the rules. The dates governing rural systems would apply to all systems that are not classified as urban.

17. For each milestone identified, licensees would be permitted to exceed the maximum channel spacings, without jeopardizing their primary status, upon a demonstration that their proposed system would operate with an efficiency that is equivalent to, or greater than, the efficiency normally achievable in the stated bandwidth. For purposes of type acceptance, all radios would have to be capable of transmitting at least one voice-grade communications circuit or a net data throughput of at least 4.8 kilobits per second.

Urban Systems

18. The key dates for urban systems are as follows:

- January 1, 1997 (Effective date of new rules + 2 yrs.)

  New radio systems licensed on or after this date would have to operate on channels of 12.5 kHz or less in order to attain primary status. All new radio systems licensed on or after January 1, 1997 that operate on channel spacings greater than 12.5 kHz would be secondary.

- January 1, 2007 (Effective date of new rules + 12 yrs.)

  All urban systems, regardless of the date on which licensed, would have to operate on channels of 12.5 kHz or less in order to retain primary status.

- January 1, 2011 (Effective date of new rules + 16 yrs.)

  New radio systems licensed on or after this date would have to operate on channels of 6.25 kHz or less in order to attain primary status. All new radio systems licensed on or after January 1, 2011 that operate on channel spacings greater than 6.25 kHz would be secondary.

- January 1, 2021 (Effective date of new rules + 26 yrs.)

  All urban systems, regardless of the date on which licensed, would have to operate on channels of 6.25 kHz or less in order to retain primary status.

Rural Systems

19. The key dates for rural systems are as follows:

- January 1, 1997 (Effective date of new rules + 2 yrs.)

  New radio systems licensed on or after this date would have to operate on channels of 12.5 kHz or less in order to attain primary status. All new radio systems licensed on or after January 1, 1997 that operate on channel spacings greater than 12.5 kHz would be secondary.

- January 1, 2011 (Effective date of new rules + 16 yrs.)

  New radio systems licensed on or after this date would have to operate on channels of 6.25 kHz or less in order to attain primary status. All new radio systems licensed on or after January 1, 2011 that operate on channel spacings greater than 6.25 kHz would be secondary.

- January 1, 2021 (Effective date of new rules + 26 yrs.)

  All rural systems, regardless of the date on which licensed, would have to operate on channels of 6.25 kHz or less in order to retain primary status.

Secondary Offset Operations at 450-470 MHz

20. The plan also contains special provisions to permit the operators of 450-470 MHz systems licensed on a secondary basis pursuant to Section 90.267 to convert to primary status. The key dates applicable to these systems are:

- January 1, 2011 (Effective date of new rules + 16 yrs.)

  All secondary systems licensed on the offset channels would have to operate on channels of 6.25 kHz or less in order to attain primary status vis-a-vis new systems.

- January 1, 2021 (Effective date of new rules + 26 yrs.)

  All secondary systems would have to operate on channels of 6.25 kHz or less in order to attain primary status as against all systems.

The licensees of systems currently operating on the offset channels would have to designate specific transmitter coordinates in order to gain primary status. Licensees who choose not to designate specific coordinates would continue to be licensed for low-power itinerant operations on a secondary basis.

21. When referencing a "new system," the associations intend this term to mean any system that is not functionally integrated with an earlier-installed land mobile radio system.

The term "existing system" includes any land mobile radio system that was in operation before the relevant deadline or a radio station that is functionally integrated with such a system. A new mobile relay facility which is being constructed to extend the coverage of an existing land mobile system and which would relay the traffic of mobiles already operating in conjunction with an existing system would be considered an "existing system."

CONCLUSION

22. After considerable study and careful deliberation, the undersigned user associations have formulated the plan outlined as part of a cooperative effort with the Federal Communications Commission to promote more intensive use of the Private Land Mobile Radio spectrum. The participating associations and the users that they represent believe that this plan will achieve the goal of maximizing the use of the available spectrum and introducing greater efficiencies.

WHEREFORE, THE PREMISES CONSIDERED, the undersigned associations respectfully submit this plan for efficient and orderly conversion to narrower channelization in the Private Land Mobile Radio Services. We request Commission consideration of this plan in conjunction with the ongoing efforts in this proceeding.

Respectfully submitted,

American Association of State Highway and Transportation Officials

American Automobile Association

American Petroleum Institute

American Trucking Associations, Inc.

Association of American Railroads

Ronnie Rand /JGD
Association of Public Safety Communications Officials-International, Inc.

Kenton Sturdevant /JGD
Forest Industries Telecommunications

Industrial Telecommunications Association, Inc.

Alfred B. LaPasse /JGD
International Taxicab and Livery Association

Eldon Wesley /JGD
Manufacturers Radio Frequency Advisory Committee, Inc.

Mark J. Golden /JGD
National Association of Business and Educational Radio, Inc./Personal Communications Industry Association

Kam M. Falkenthal /JGD
Telephone Maintenance Frequency Advisory Committee

UTC--The Telecommunications Association

13-Oct-94

PROPOSED PART 88 TRANSITION PLAN

	Year 2 (e.g., 1/1/1997) *[Example dates assume 1/1/1995 effective date of new rules]*	Year 12 (e.g., 1/1/2007)	Year 16 (e.g., 1/1/2011)	Year 26 (e.g., 1/1/2021)
MANUFACTURERS	All new equipment which is sold must be maximum 12.5 kHz* or 12.5 kHz compatible (e.g., dual-mode 25/12.5 kHz; but not single-mode 25 kHz equipment)		All newly type accepted equipment must be maximum 6.25 kHz* or 6.25 kHz compatible. (e.g., dual-mode 12.5/6.25 kHz, but not single-mode 25 kHz or 12.5 kHz equipment)	All new equipment which is sold must be maximum 6.25 kHz* or maximum 12.5 kHz if convertible to 6.25 kHz.
URBAN SYSTEMS** Existing Systems		All urban systems must operate at no more than 12.5 kHz* bandwidth to retain primary status.		Must operate at no more than 6.25 kHz* bandwidth to retain primary status.
New Systems***	Must operate at no more than 12.5 kHz* bandwidth to attain primary status.		Must operate at no more than 6.25 kHz* bandwidth to attain primary status.	
RURAL SYSTEMS** Existing Systems				Must operate at no more than 6.25 kHz* bandwidth to retain primary status
New Systems***	Must operate at no more than 12.5 kHz* bandwidth to attain primary status.		Must operate at no more than 6.25 kHz* bandwidth to attain primary status.	
SECONDARY OFFSET USERS AT 450-470 MHZ (All Markets)	May attain co-primary status with other new systems if operations are limited to no greater than 12.5 kHz bandwidth.			Must operate at no more than 6.25 kHz* to attain primary status as against all users

* Bandwidth limitations may be exceeded if the system will operate with efficiency equivalent to or better than the stated bandwidth. For purposes of type acceptance, the radio must be capable of net data throughput of at least of 4.8 kbps.

** "Urban Systems" are those located within 100 miles of any of the top 60 urban areas listed at Section 90.741. All other areas would be considered "Rural." Upon request by a petitioning party, other areas of the country may be declared "Urban" upon a showing of increased frequency congestion necessitating early introduction of spectrum efficient technologies.

*** A "new system" is one which is not functionally integrated with an earlier-installed land mobile radio system. To be considered an "existing system," the facilities must be in operation prior to the relevant deadline or must be functionally integrated with such a system. For example, a new repeater site which will be used to extend coverage of an existing system and will relay traffic of mobiles currently operating with an existing system would not be considered a "new system." (See definition of "Land Mobile Radio System" at Section 90.7).